

## Visualization of similarity measures for binary data and 2 x 2 tables

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### Abstract

We propose methods of 3D visualization of the main similarity measures for binary data and 2 x 2 tables. We present the shapes of Jaccard, Dice, Sokal & Sneath, Roger & Tanimoto and other similarity measures. Such visualization of the similarity measures gives the direct, visual, method of comparison of these measures and helps to understand the similarity and the difference between them. Based on the visualization of the two known parametric families of similarity measures the paper proposes the new parametric family of measures generalizing these two families and giving the possibility to construct similarity measures occupying the intermediate position between them.

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### Keywords

Binary Variable, Contingency Table, Similarity Measure, Visualization